THE
VETERINARY JOURNAL

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Biography

OUR MOST RECENT LADY GRADUATES.

THAT the ladies have "come to stay" in our profession, as well as most others, is evidenced by the fact that not only are there now lady veterinary students pursuing their studies in the classes at Liverpool, Dublin, and Glasgow, but that two more have graduated as Members of the Royal College of Veterinary Surgeons; thus making a total of four altogether.

Their respective College careers, too, have been unbroken by any loss of time, for Miss Roberts and Miss Woodward have passed each examination successfully on the first attempt, the latter lady taking honours in the final; an accomplishment rarely attained.

With each it was the liking for animals which prompted the desire to enter the profession, and during the College vacations they both wisely "saw practice." The advantage of this is already shown in the fact that both are contented in the prospect of the future—each intending to specialise in canine work; a wise decision, and one which will, if followed assiduously, bring fame and fortune. The lady veterinary surgeon who adopts canine practice as a career will be sure to attain success, as in this formerly much-neglected branch of veterinary work there is a great field open for study and research.

The two most recent lady graduates in the Veterinary profession.

The study of bird diseases, too, needs its devotees, and the lady graduate might do worse than to specialise in this. The novelty of the woman veterinary surgeon will soon pass off, as has that of the woman doctor, and it is for the early pioneers to show that they can make as good a mark in the veterinary branch of medicine as have their sisters on the human side.

At the thresholds of their respective careers we welcome our lady graduates, and it is for them now to so map out their own respective futures that their names will rank equally in the subsequent history of the profession with those of the opposite sex who have helped to build up the edifice of veterinary science.

Editorial

FOREIGN TRAVEL AND INTERNATIONAL COURTESIES.

THE courteous and enthusiastic welcome which has been accorded by our Continental colleagues to each of the respective annual parties organised by the VETERINARY JOURNAL has been of the warmest possible character, and the trip to Denmark and Sweden, which is described in another column, will not only always be remembered for the pleasure it gave to everybody, but for its great educational value and interest. As is usual in all things British, the cost and detailed arrangements for the purpose of visiting foreign schools, or studying the veterinary methods of other countries, has to be arranged privately; for there is no Government fund, such as exists in some countries, to subsidise educational efforts of this kind. Notwithstanding that, it will be generally admitted by those who have tried the experiment, that a good holiday of this kind can be arranged as economically (probably much more so) as a holiday in England, and at the termination one feels that the time has been employed with profit as well as with pleasure.

No one who has not tried the experience can realise its advantages both as a means of broadening the mind, and as a means of strengthening international friendship and exchange of opinions between ourselves and our Overseas colleagues.

General Articles

THE FOURTH ANNUAL "VETERINARY JOURNAL" CONTINENTAL TOUR.

In connection with the above we quote the following paragraph which is translated from *National Tidende*, Copenhagen, October 5th, 1926.*

"A party of 11 English veterinary surgeons, under the leadership of Professor Hobday, have been spending a week in Denmark.

"Together with Professors Morkeberg, Bang and Nielsen, who acted as cicerones, they investigated the fine new developments at the Veterinary and Agricultural College, and then went a tour round, to visit several model farms and abattoirs; after which they returned to England.

FIG. 1. The Party.

"Before their departure, our English guests visited the West Cemetery, where they laid a beautiful wreath on the grave of Dr. Schmidt, thus paying honour to the memory of the Danish veterinary surgeon who has benefited the whole world by his discovery of the means to cure milk fever in cattle."

The party consisted of Mr. and Mrs. Jackson Young (Edinburgh), Mr. and Mrs. W. Bell (London), Messrs. W. Woods (Wigan), T. H. Hobson (Leicester), F. W. Willett (Staines), D. Gladstone Davies (Swansea), W. W. Lang (Brigg), R. G. Anderson (Cupar, Fife), and Professor Hobday, who was in charge of the arrangements.

* For the photographs we are indebted to Professor Folmer Nielsen, of the Copenhagen Veterinary College.

Starting from Liverpool Street on the evening of Friday, September 24th, and crossing to Denmark *via* Harwich and Esjberg, they arrived at Copenhagen on Sunday, the 26th, at 8 a.m., being met at the station by Messrs. Jensen and Seidel, two young Danish veterinary surgeons, who hold State appointments in the Public Health Service, whose knowledge of the English language made everybody feel at home at once. Mrs. Jensen and Mrs. Seidel joined the party later in the day, and as they, too, spoke English (in fact almost every Dane seemed to understand our tongue, and by far the majority whom we met could speak it fluently) their company was much appreciated by the ladies.

In the afternoon a motor trip was made around the city, visiting the famous Thorvaldsens Museum of Sculptures, Art galleries and noted public squares and buildings. After dinner the whole party had their first glimpse of a Danish home, being hospitably entertained by Messrs. Jensen and Siedel at the flat of the former.

The whole of Monday was spent in visiting the various departments of the wonderful Danish Veterinary and Agricultural College—one of the largest (and certainly one of the best) in the world. No words can describe it sufficiently adequately and it should be seen by every British veterinary surgeon, for its vast resources, good organisation and management, orderliness and the opportunities for original work, seem incredible to those who have only seen the comparatively cramped efforts of those who have to rely only upon private enterprise.

Professor Folmer Nielsen, whose recent masterly demonstration on the treatment of sterility in cattle before the National Veterinary Association meeting in Dublin is still fresh in the minds of all who met him there, had arranged a time programme with his colleagues, who personally received us, each in his own department in turn as follows :—

9.30 a.m.—Professor Carl H. Hansen, Clinic for Small Animals.

10-11.30 a.m.—Professor Morkeberg, Surgical Clinic.

11.30-12.30 p.m.—Professor M. Christiansen, Bacteriological Department, where the much-esteemed former Director, Professor Bang, whose name is so well-known all the world over, bade us welcome.

12.30-1.30 p.m.—Lunch at the invitation of Professor H. O., G. Ellinger, the Director.

This was, it is needless to say, a most pleasing function, and the numbers of dainties on the luncheon table gave much speculation as to whether it would be wise (or even possible) to keep time with the arranged programme afterwards ! !

In the name of his colleagues, Professor Ellinger bade the party welcome and the courtesy was suitably acknowledged and reciprocated

by Professor Hobday, as the spokesman for the British guests. This being concluded, the next visit was to the Medical Clinic of Professor Olaf Bang; and from there, in turn, to the Horse-Shoeing Clinic, Class Rooms and Forge of Professor Grunth, and the well-designed and equipped Pathological Anatomy Department of Professor Folger.

Each of these gentlemen took an infinity of pains and patience to explain the respective section in which each one is, indeed, a Master, and the time passed all too quickly. The afternoon was completed by a visit to an Animal Society's Canine Hospital, well-equipped with the most modern kennels, operating theatre and table, etc., receiving and dressing rooms, all under the supervision of Dr. Sven Larsen.

On Tuesday the 28th, automobiles were at the hotel door at 9.30, and Professor Folmer Nielsen personally accompanied the party to the Museum of Agricultural History, at Lyngby, where a most fascinating couple of hours was spent inspecting not only ancient and modern landmarks in agricultural science, but cottages and farm houses removed piecemeal from the isolated coasts and other places in one or other of the archipelago of islands (of which the State of Denmark is composed) and reconstructed in this museum at Lyngby, to form a national memorial of the dwelling houses of the Danish folk of former days. After lunch at Leidersdorf, Hillerod, a visit was made between two and three to Frederiksborg Castle, and between four and five to Kronborg Castle, at Elsinore, where, on the castle rampart, we were shown the place where Hamlet saw his father's ghost; and where we were shown the former's reputed grave.

On Wednesday some more departments of the Veterinary College were visited, commencing with the Laboratories of the Division of Plant Industry, and following up with the Physiological Laboratory of Professor H. Mollgaärd, of Sanocrysin fame. This gentleman answered many questions and showed us numerous pathological specimens illustrating the results of the use of Sanocrysin in the treatment of tuberculous patients. At the moment of our visit, Professor Mollgaärd was busy observing the thermal and caloric effects of certain dietetic rations upon a cow, the original being enclosed in a large and specially prepared box in such a way that full and complete observations could be made upon the intake and output of air, etc. etc. His researches on the physiology of this subject are already well known to his *confrères* in all countries.

In the Chemical Laboratory Professor Andersen explained the work

done by the College authorities for the benefit of the dairy farmer; especially in regard to the pure milk production question.*

This brought us to the end of a very interesting morning, and by the generosity of Professor and Mrs. Folmer Nielsen, the whole party was entertained at lunch in their house. Here, again, according to Danish custom, toasts of welcome friendship were proposed and suitably acknowledged and reciprocated. After lunch Dr. Thomsen, the first assistant to Professor Jensen (who was away), took the party over the serum laboratory and stables, afterwards accompanying them personally to the City abattoir, which is under the control of Director Dalsgaard. Demonstrations were given of the methods of slaughter and meat inspection, and a tour was made of all the lairages, the Friebank, and, indeed, every part of the premises. Between the visit to the Serum Institute and the Abattoir, a real intellectual treat was enjoyed by everybody in the shape of a lecture by Professor Morkeberg (who is, by the way, a physician as well as a veterinary surgeon) the Controlling Director of the establishment). At the Copenhagen City Milk Co-operative Dairy, Professor Morkeberg, after relating the history and aims of the system, took the party over the whole of the huge buildings where the methods of dealing with the milk right from the time of its arrival from the farms, until it is bottled and sealed ready for the customer. After seeing the scrupulous cleanliness of the place, and the care which is taken, together with the excellent organisation of the process, one could readily understand the reason why the example of Denmark is universally quoted when the subject of clean milk is discussed.

At night Professor and Mrs. Nielsen, not contented with having entertained the whole party at luncheon, had arranged a still larger gathering in our honour, and gave a dinner, in their own house, where more than 20 guests sat down.

Time passed only too quickly, for it was one of the pleasantest of all our gatherings, and an evening to be always remembered.

On Thursday a trip was made into the country to the Government Experimental Milk Factory and tubercle-free herds and dairy farms, with lunch at Frederikssund, followed by a visit to the Frederikssund Co-operative Bacon Factory, where a very large trade is also done with eggs for export—approximately a million kilos. of eggs being dealt with annually. Methods of testing, packing, etc., were explained by Director F. L. Sieck; and a practical demonstration of the skill used in packing the eggs was given to the party, when the

* In Denmark, the Departments of Veterinary Chemistry and Hygiene take, *as they ought to do in all countries,* the post of honour and responsibility at the top of the scale in work which legitimately belongs to us as a profession in connection with milk and its production; right away from the cow to the consumer.

heaviest of them (whose name is not for publication, but whose weight was estimated at somewhere about 16 stone!) sat down on the uncovered top layer of a crate of eggs without even so much as cracking one of them. Tea was provided by the generosity of Mr. and Mrs. Rong, whose farm house, beautifully situated, provided excellent opportunity for those who had brought their cameras. Mr. Rong took the party all around his well-kept cowsheds, justifiably expressing pride in his breeds of cattle and the fact that he possessed a tubercle-free herd.

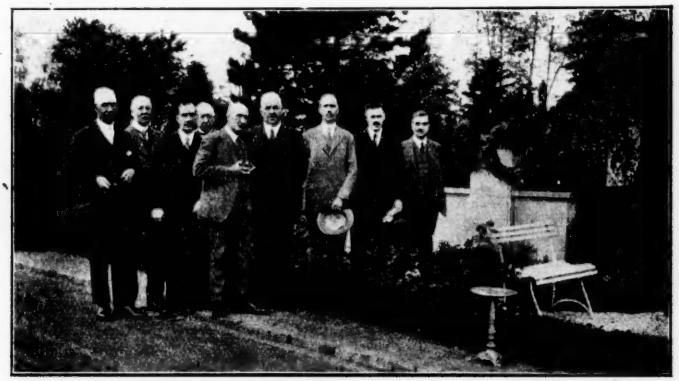


FIG. II. The Party at Dr. Schmidt's grave in Copenhagen Cemetery.*

On Friday morning the ladies were fetched away by the wives of some of their Danish colleagues, to "see the shops;" and the remainder of the party, again kindly accompanied by Professor Nielsen, went to the Western Cemetery to honour the memory of their world-famous Danish colleague, Dr. Schmidt, whose work on milk fever is so well-known in the veterinary and agricultural world. Collectively they reverently placed a wreath on the grave, and the Scotchmen of the party (Messrs. Jackson, Young, Bell, Lang, and Andersen), seeing a wreath of purple heather, purchased this and placed it, too, beside the other. The ceremony ended, photographs were taken as souvenirs, and the party wended their way back to the hotel. On Friday night four of the party (Messrs. Woods, Willett, Davies, and Hobday) went by the night mail to Stockholm, and on Saturday morning the remainder of the party returned to England.

The weather had been excellent throughout, and everybody agreed that every minute of the trip had been most enjoyable.

* At Kolding, the town where Dr. Schmidt practised his profession for many years, there is a Stone Monument, erected to the honour of his name by subscriptions from members of the profession in Denmark, Sweden, Norway, and Finland. It bears the following inscription: "With your discovery you eliminated the milk-fever scourge and made your name and town world-famous."

THE SWEDISH TRIP.

ARRIVING at Stockholm on Saturday morning about 9 o'clock, and making straight for the Grand Hotel, which is beautifully situated, facing the water, a telephone message was awaiting the party from Professor Forssell, to come as soon as convenient to the Veterinary School, which is on the outskirts of the city.

Here, as in Copenhagen, we found a wonderful College, spacious, well-equipped, with every necessary department, State-supported, and ideal in every way.

The Rector, Dr. Saklstedt, gave us a hearty welcome, inviting us in the name of Mrs. Saklstedt and himself to lunch, but handing us over in the meantime to the well-known professor of surgery, Professor Forssell, who had arranged, for our benefit, a demonstration of his special operation to cure crib-biting. A German professor, from the Clinic of the Hanover Veterinary School, was there, too, as a spectator, and Professor Forssell demonstrated each step of the technique in his usual masterly manner. After the operation we saw several patients, upon whose neck the offending muscles had been excised, permanently cured of their habits and now in excellent bodily condition.

We next visited Professor Dahlström in the Small Animal Clinique, the operating table and theatre equipment being of the latest pattern. After lunch a tour was made of the whole of the buildings, Dr, Saklstedt himself being our guide. Lunch itself was a festive meal, and here, as in Copenhagen, the usual courtesies were given and reciprocated. In the evening, by the kind invitation of Professor and Mrs. Forssell, dinner was taken at their house, and amongst the invited guests was Professor John Vennerholm, the former Rector, whose text-book on surgery is one of the standard text-books of the world. His cheery smile made one almost wonder whether he had not solved the problem of perpetual youth.

As everybody spoke English, the English guests were soon at ease, although envying their Swedish colleagues their bilingual powers. The evening passed only too quickly.

On the following morning (Sunday) on the invitation of the manager (Mr. Erik Brändström), of the " Aktiebolaget Separator " (the Swedish appellation for what is known in England as the " Alpha Laval Milk Separator " & Milking Machine Co.), the party were taken by motor into the country, in order to see some dairy farms on which the Alpha Laval milking machines were in constant use. We were accompanied by Director Berjtson, Mr. Orre, and Engineers Lindgren and Ehrling, two of whom spoke English well and were instructed to show us everything.

We visited in all some 10 or 12 dairy farms—some large, with over 100 cows, and some with only about 20. In all of them the Alpha Laval milking machine was in daily use, and the cows were milked three times a day. Most of those which we saw were tubercle-free herds.

One farm in particular caught our attention, as a practical illustration of the value of labour-saving machinery, as the whole herd of 70 cows was milked and attended to by one man and one woman.

In each instance the owner, or his foreman, spoke in the highest terms of the method of milking by this machinery, and stated that they would not like to go back to the older method of hand-milking. This method has everything to be said in its favour, especially in regard to the production of clean milk; as, even if the cows were not groomed (which they were in all these herds), the danger of loose hairs and bits of cow-dung, etc., dropping into the milk is entirely nullified.

This is a subject, however, which is too important to dismiss in a few words, and must be made the subject of a special article at a later date.

By the courtesy of our hosts we saw, not only a considerable number of dairy farms, but a large number of types of their respective animals and a good portion of the country around Stockholm.

On Monday morning Professor Forssell personally accompanied us to the large City Co-operative Milk Distributing Centre, where we saw the whole process of dealing with the milk from the time of its arrival from the farmer, until it reaches the consumer.

What strikes one on entering the place is the good organisation and the spotless cleanliness of everything. After spending some time there, we were taken over a large bacon factory and thence to the Abattoir, where, by the city by-laws (except in the case of Jewish slaughter), every animal is stunned before the knife is used. The Stockholm Abattoirs are modern, being built in 1912, and cost about 6½ million krone.

There are three whole-time Veterinary Inspectors, and about 30,000 cattle, 20,000 pigs, with 1,200 to 1,500 horses, are slaughtered annually. The lairages are excellently apportioned, and the animals are fed and watered right up to the morning of slaughter.

In the early afternoon Professor Forssell took the party round some of the principal buildings in the city, and for a drive in the very fine park and suburbs; and at 4 o'clock an appointment was kept to visit the works of the Alpha Laval Cream Separator Company—over 200,000 of whose machines are sent annually to all parts of the world. Their use was explained and everybody was keenly interested.

At night the party returned to Copenhagen, and here, another pleasant surprise awaited us, for Colonel Friis, Veterinary Surgeon to H.M. the King, and the Chief Veterinary Officer to the Police, called at the hotel with his car, and we were again *fêted*; being taken to see, amongst other things, the police official building, the world-famed Tuborg lager beer brewery, and a cavalry barracks, where Captain Friis (son of Colonel Friis) is the Veterinary Officer in charge.* Lunch was taken in the suburbs at the seaside, a further pleasant experience of the exceeding hospitality and kindness of our Danish hosts.

Our faces were turned towards England on Wednesday morning, and we arrived in London on Thursday night, after one of the most enjoyable, and educationally instructive, of trips possible.

THE NEW SURGICAL TREATMENT AGAINST CRIB-BITING.

By GERHARD FORSSELL,
Professor of Surgery, Royal Veterinary College, Stockholm, Sweden.

THERE have been made many researches to control crib-biting by operations. In 1872 Gerlach performed *myotomy* (not *myectomy*) on the scapulo-hyoideus (omo-hyoideus) with good results. *Dieckerhoff* (1897) sectioned the spinal accessory nerve to place the sterno-maxillaris out of action, and later he combined this with myectomy on the sterno-thyreoideus and sterno-hyoideus in the middle of the neck, but there were only a very few good results reported. At an earlier date I operated on a number of crib-biters by Dieckerhoff's combined method. As a result, some horses lost the vice, but most of them continued to crib-bite. I had occasion to make observations on one of the unlucky cases, in regard to the muscles used by the horse after the operation. By palpation of the neck, it was discovered that the horse used the omo-hyoideus, which muscle was heavily contracted. After that the upper part of this muscle was resected, and the horse ceased his crib-biting. Further, it was shown that resection of nerv. accessorius, the spinal accessory nerve, was not sufficient in all cases to cripple the sterno-maxillaris. The muscle was atrophied to one third of its size, but did not cease to function. After this, I also made a myectomy on this muscle. The results of many years' experiment showed me that rather great parts of the muscles were to be resected, if the *habitués* of the vice were to be ameliorated even to the slightest possible extent. This method has been previously described by me in the Swedish Veterinary Journal (*Svensk Veterinärtidskrift*) and in *Berliner Tierärztliche Wochenschrift*, 1913, 1914 and 1918.

* Capt. Hjalmar Friis is also an authority on Danish Sculptures and Statuary, on which he has published a book.

ANATOMY.—The muscles operated upon by my method are the *sterno-maxillaris*, *sterno-* and *omo-hyoideus*, and *sterno-thyroideus*. The situation of these muscles in the field of operation is to be seen in Fig. 1. The sterno-maxillaris has its origin on the cariniform cartilage of the sternum, and terminates upon the angle of the maxilla with a thin tendon, which passes through the lower part of the parotid ; the muscle is surrounded by a fibrous covering. Along its upper and

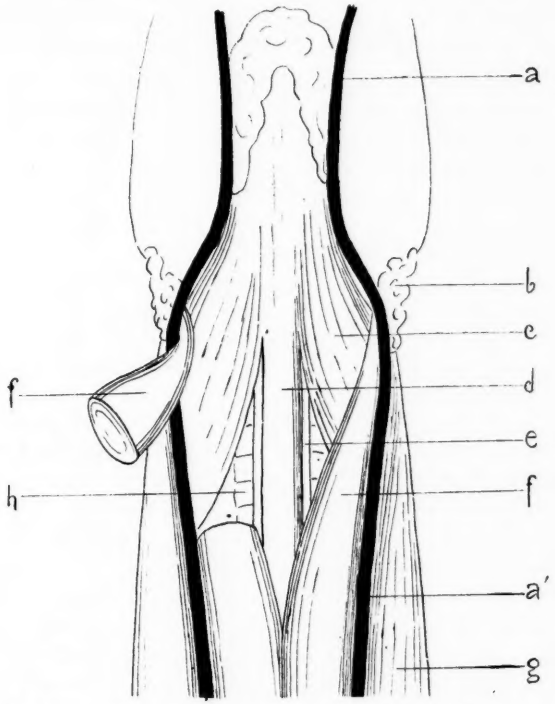


FIG. 1.—Skeleton-drawing of the anatomy of the field of operation. *a*, vena maxillaris externa ; *a'*, jugularis ; *b*, parotis ; *c*, omo-hyoideus ; *d*, sterno-hyoideus ; *e*, sterno-thyroideus ; *f*, sterno-maxillaris ; *g*, brachiocephalicus.

lateral side runs the jugular vein. A little above the middle of the neck both muscles are lying close together ; then they separate, and there is an opening between them. They are often enclosed in a thick layer of fat. The omo-hyoideus has its origin on the sub-scapular fascia and is inserted on the hyoid bone. The upper part of the muscle is broad and flat, and separates the jugular vein and the carotid artery. The muscles of both sides and both sterno-thyroids

are in the upper third of the neck, joining in one muscle-mass, which covers the larynx and trachea, and is bounded on the sides by the maxillaris externa. All the four sterno-thyro-hyoideus muscles which have their origin on the sternum, are at first joined together, and covered from the sterno-maxillares. A little beneath the middle of the neck the muscle mass is mixed up with transverse tendon tissue, and from that point the four muscles separate. Both sterno-thyroids are rather close to each other, separated from the trachea only by fibrous tissue inserted on the thyroid cartilage. Both sterno-hyoides cover the thyroids and join both omohyoides as already described.

The operating field extends from the larynx to the middle of the neck. Except for the great veins there are no dangerous blood vessels, or nerves, which can be damaged by the operation. As the result of the hypertrophy of the muscles, the common muscle arteries may be more important than in normal muscles, but never in any more than an ordinary way. When describing the details of the operation some anatomical remarks will be made.

Operation.—The horse is operated upon in the dorsal position. Before he is cast, he is usually given an intravenous injection of chloralhydrate (8-15 gram) in 7 per cent. solution. This is of great value; and with this percentage of chloralhydrate there is no danger of any periphlebitis. The neck is shaved from the larynx to the middle of its length. In the disinfection of the skin, care must be taken that there is not too much irritation, or unnecessary bleeding will follow. Clean and dry the skin after the shaving; wash over with spirit and disinfect with 5 per cent. iodine solution.

The operation is performed under chloroform narcosis, and I must earnestly advise the operator to use only fresh, good chloroform, and under no circumstances to use old stuff, which may have been standing a long time in a half-filled bottle. Such chloroform may be very dangerous, especially in this operation, and will occasionally result in post-operative pneumonia. The chloroform should never be dropped on during an inspiration,* or the airstream may catch the unvapoured chloroform and bring it directly on the mucous membrane of the nose, resulting in rhinitis as a sequel.

During the operation one must take care that *the occipito-atlantal joint is never fully extended.* The nose should make an angle with the operation table of at least 30°, otherwise there will be a tension of the recurrent nerves, which may result in paralysis of both the arytenoid

* This particularly refers to the method of administration of the chloroform, which is by means of a drop bottle and somewhat different from the way this anæsthetic is usually administered in Great Britain (Frederick Hobday, Editor, *Veterinary Journal*).

cartilages with a formidable roaring and the suffocation of the horse, if tracheotomy is not performed very quickly. This complication

FIG. 2.—The omo-sterno-hyoids of the both sides are separated and the left omo-sterno-hyoid is cut through at the upper angle of the wound.

happened twice in my experience before I learned the danger. Neither of the horses died, but in one case I had afterwards to make the

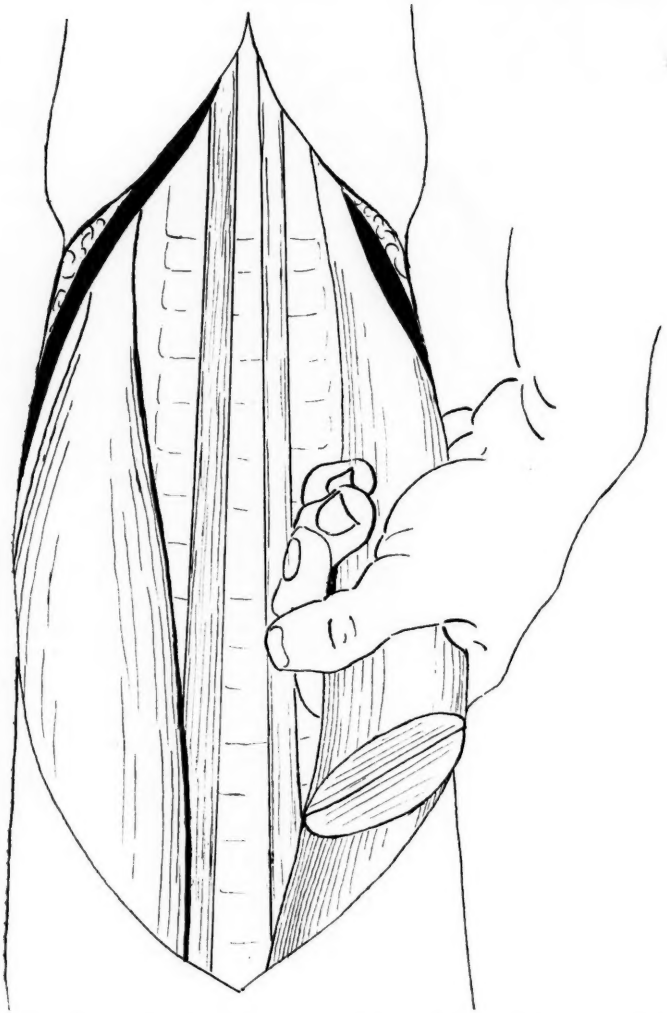


FIG. 3.—The omo-sterno-hyoids are resected, the left sterno-maxillaris is freely dissected, lifted up, and cut through at the lower part.

stripping of the ventricles ; in the other the tension probably had not been very severe, because the roaring disappeared after a week.

The operation is performed in the following way. An incision is made through the skin from the thyroid cartilage of the larynx in the middle line, downwards as far as the middle of the neck. This is about 40 centimetres. The skin is carefully dissected on both sides until one can see the lateral border of the omohyoideus close by the external maxillary vein, and then the dissection goes downwards and sideways, until one sees the sterno-maxillaris bordering upon the jugular vein, or a little more. There may be rather a lot of bleeding from the skin arteries and from vessels of the conjunctival tissue, but by putting on some forceps this can easily be controlled. Then the muscle mass of the joined omo-sternothyroids is divided by an incision in the middle line. The incision goes down separating the two sterno-maxillares to the length of the skin wound. One must take care that the trachea is not hurt. The operation may now be continued in different ways, but for the operator who is doing it for the first time, it may be advisable to begin with myectomy of the omohyoideus. This muscle is carefully separated from the external maxillary vein. If one dissects carefully and has a sharp scalpel, there is no special danger of cutting the vein, which is here covered and protected by fascia. One finger is now introduced in the upper angle of the middle muscle wound and the muscle is lifted up. With the finger one then perforates the fibrous tissue which is resting at the lateral border of the muscle. The muscle is now lifted on the finger and is cut across transversely, the resulting hæmorrhage being easily controlled. After the cutting the muscle contracts. It is not advisable to sever the muscle near its insertion on the hyoid-bone, because one thereby always divides some lymph vessels, which is apt to be followed by a lymph flow ; this sometimes lasting for a week or more. The cut omohyoid is then seized and drawn up, and with the knife it is made free on its upper and under side. On its lateral border there is a fascia-like fibrous tissue, which is divided at the edge of the muscle, but nothing of the muscle need be left back. Here one encounters some vessels, but they are not of much consequence. The muscle is also made free from where it is covered by the sterno-maxillaris, and it is then resected by an incision through the muscle, parallel to the sterno-maxillaris. One must remember that the muscle disappears between the jugular vein and the carotid, and at the resection the knife must be handled so that only the muscle is cut through. Now the sterno-hyoid is made free and cut through in the lower angle of the skin wound ; then the omo-sterno-hyoid muscle is taken away on the other side. The sterno-maxillaris is then operated

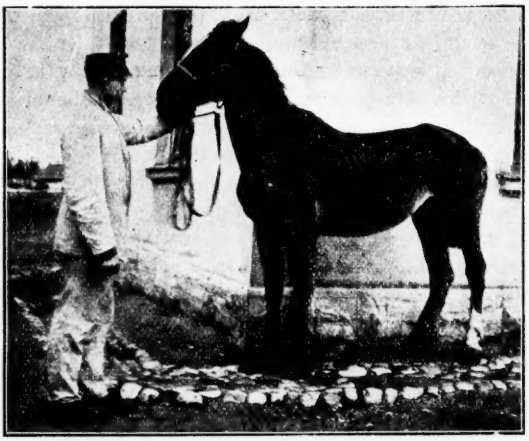


FIG. 5.—A crib-biter before the operation. Photograph taken by Regiment Usveterinär Norrgren.

FIG. 4.—Suture of the skin wound.

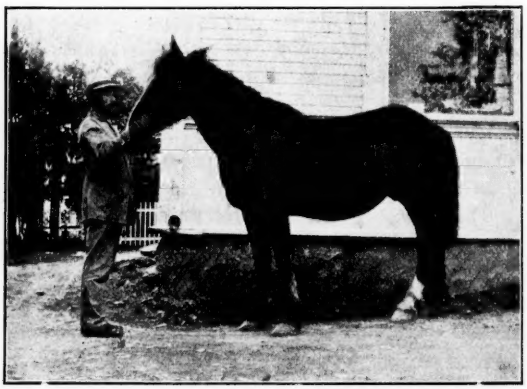


FIG. 6.—The same horse as in Fig. 5, six months after the operation.

upon. As stated, it is enveloped in a fibrous covering, but this must be removed with the muscle. At first one divides the connection between the jugular vein and the muscle. It is fibrous tissue and can be operated upon without any danger of injuring the vein, because this is covered by a fascia. It is wise to begin with this separation at the lower part of the muscle. After this try to lift the muscle, and one may find that there is some connective tissue on its under side, just in the situation of the operation. This tissue is easily perforated with the fingers, or with the knife, and then the left hand is introduced under the muscle and this is lifted. The muscle is cut through in a manner which is not quite transversely, but somewhat oblique from outside, inwards, and upwards. In that way the muscle stump is less prominent after the healing of the wound. Now the sterno-maxillaris is drawn forward, and with the knife-edge against the muscle, it is made free until it disappears into the parotid region. Here one sometimes unavoidably injures an artery, which is taken up with the forceps. The tendon of the muscle is drawn out from the parotid region and sectioned. The other side is operated upon in the same way. Both sterno-thyroids are now resected. Then the more important vessels are ligatured with catgut, and the small ones are twisted. The skin wound is then sutured. We always use thin (0.4 millimetre) metal sutures, of tinned copper, and ordinary suture needles. Tinned copper thread as suturing material was, so far as I know, first recommended by Professor Folmer Nielsen, of Copenhagen ; and it is a material which has many advantages. The suturing is done as a combined continuous suture and a continuous mattress suture. The continuous mattress suture is made as illustrated in Fig. 4. It is to be considered that the suture is not to be drawn too tight or disturbance of the circulation from necrosis may result if the skin becomes swollen. The upper and lower angle of the wound are left open for drainage, and the wound is then covered with a bandage around the neck. The horse is not permitted to eat or drink during the first five hours after the operation, in order to prevent any after-bleeding. The wound is then treated according to the usual surgical rules. The less the wound is washed the quicker it will heal, but if there is much purulent discharge, it may be necessary to wash it. If there is considerable discharge, the wound is better left without covering. There is, of course, always a quantity of serum, because lymph vessels have unavoidably been injured when performing the operation. During the first week afterwards, the horse ought to be put on pillar reins. The sutures can usually be taken away after twelve days and the horse moved after 12 or 14 days.

COMPLICATIONS.—During the operation one has always to take care not to fully extend the occipito-atlantal joint in order to avoid a tension of the recurrent nerves and roaring as a consequence. Should this happen tracheotomy must be made as quickly as possible. An incision between two tracheal cartilages is quite enough. The second or third day after the operation frequently the horse shows sign of rhinitis, due to the chloroform. This may be very slight, or it may last some weeks before healing. I recollect one case in which there was a severe infection, which was complicated by meningitis and ended fatally. By careful chloroformization the rhinitis will be avoided. The treatment of this is best effected by washing out the nostrils with warm (not cold) dilute antiseptics two or three times a day. Serum treatment may also give good results.

Pneumonia occurs very seldom, but when it happens it can always be traced back to bad chloroform. Personally I have never yet seen this complication. Especially when the operation has taken a long time, is bad chloroform, to, if used, likely to produce a pneumonia. Such cases have been known to take a rapid and fatal end.

Serious infections of the wound may happen, but this is unusual when the operation is performed under careful asepsis.

When yearling or two-year old horses are operated upon, it sometimes happens that they develop a malformation of the trachea. This becomes flattened from side to side, but there is not enough narrowing to cause any obstruction.

RESULTS.—From the patients operated upon at the College by myself and my assistants or students, I have traced up the results upon some 76 horses, all the cases at least two years old. Others have been sold and cannot be traced. About 80 per cent. have become quite sound; 10 per cent. have been ameliorated after the operation, and 10 per cent. have continued the crib-biting. But only in one case has it been reported that the horse continued to have attacks of colic. From other Swedish operators the following results are reported: Hederstedt, Chief of the military veterinary service, has operated on about 100 cases, with only five failures; Regiment Usveterinär Norrgren had done 78 cases, and all have been made free from the vice; but some cases have been re-operated upon—two of them twice. One horse died during the operation from suffocation following tension of the recurrent nerves. Regiment Usveterinär Ringberg reports 20 cases: one died of chloroform-pneumonia, one relapsed, and 18 remained sound. Rœder (Archfür wissensch. Tierheilkunde, 1918) had 24 successes out of 34 operations; improvement in four cases and no change in six cases; the proportion of good results thus being 72 per cent. Vorkink, Crezee, Sibelienk (Tijdsch.

v. Diergeneeskund, 1919) have operated on 12 cases, of which two relapsed. Hartog (Tijdsch. v. Diergeneeskunde, 1921) had six good results out of 10 operations. Saral (inaug. diss. Dorpat, 1924) has made some modification of the operation. His results were 55 per cent. cured out of 41 operations, 40 per cent. improved and 7 per cent. failures. A number of other veterinary surgeons have done this operation with excellent results. Hj. Friis and Moser (Denmark) reported six and eight cases respectively, in 1918 with good results. Stenersen (Norway) has operated on many cases, and has had more than 80 per cent. sound. Cornic (Lesneven, France) operated on 10 horses in 1925, with eight good results. Also Bucica and Cliza (Bucarest) have had satisfactory results, too.

To avoid relapses one must take care that the operation is done perfectly. All attempts to take less of the muscles than the amount above described will be followed by failure. If someone wishes to modify the operation, I will advise him to remove more of the muscles. When the sterno-maxillaris is taken away before the omohyoid muscle, one can take a little more of the latter, especially if one is sectioning the omo-hyoideus along the jugular vein before cutting near the larynx. This is a little more difficult, but if one takes care not to cut more than quite through the muscle, there is no danger that one will hurt the carotid or its accompanying nerves. Also one can go more downwards with the incision in the skin and take more away from the sterno-hyoideus and the sterno-thyroideus. All the said muscles must be operated upon. If a muscle is more or less hypertrophied it is a sign that this muscle is responsible for the crib-biting. Experience has shown that the operation in the majority of the cases at once takes away the vice, but with some horses the desire to bite remains. Those horses will try to bite if they are permitted to make the attempts, for weeks after the operation ; and if there develops a tendon-like fibrous tissue in the place of the extirpated muscles, the horse will again become a crib-biter. To avoid this one must have the manger taken away and the walls of the stall clothed with sacking, which each day must be smeared with some ill-tasting solution, such as lysol. If the horse bites on the halter-strap, this must be fastened high up on the halter well above the eyes of the animal, so that the horse cannot bite on it. If the vice returns, the horse may be re-operated upon. The fibrous cicatricial tissue is carefully taken away, and if possible some more of the muscles.

This operation has been performed on horses of different kinds, but in no case has it injured the horse's capacity for work, whether done on draught horses, hunters, school, or racehorses.

The benefits of a successful operation against crib-biting are

important. The ill-conditioned, strength-lacking horse which perhaps has frequent attacks of colic, will usually lose the vice, even before the wounds have healed. As far as I know the vice does not recur when once it has quite disappeared. As a sequel the under surface of the neck will afterwards be a little altered in appearance, but not enough to look objectionable.

A MODEL DAIRY COW SHED.

By H. W. STEELE-BODGER, M.C., M.R.C.V.S.,
Tamworth.

In describing the above the author is actuated by the desire that members of our profession may have a convenient reference upon the numerous occasions when they are asked for an opinion concerning the construction of a new shed, or the alteration of an old one.

So often in recent months one has come across articles in various newspapers and trade papers, describing so-called "lordly cow palaces," or advertising "Modern Sanitary Cow Houses," and when these are investigated they are almost invariably found to be a compilation of hygienic faults. In many cases money has been lavishly expended in erecting a building totally unsuitable for the housing of dairy cows, when, probably with half the labour and half the expense, one could have had a really hygienic shed.

To enumerate but a few of the most glaring errors which one usually sees:

The Roof Construction is complicated; often a heavy roof necessitating a network of heavy rafters, purlins, king and queen posts supported by massive beams which require a network of principals, cantilever brackets, etc., to support them, these in turn are supported by square brick or concrete buttresses, and pillars, the whole offering every facility for the collection of dust, dirt, spiders, flies, and vermin, to be dropped at intervals upon the cows and into the milk.

Lighting is usually insufficient and in the wrong place—the ideal lighting is by roof lights—a square foot of roof light is better than a square yard of wall lighting and will give an hour longer daylight. Even when roof lights are used they are frequently wrongly placed.

Ventilation.—This is almost invariably wrong. Usually there are numerous openings nearly always in the wrong place, irrespective of whether they form inlets or outlets.

Standings.—Nearly always too long and always too wide with criss-cross or herring-boning in the concrete to hold the water and render them damp.

Centre Gangway.—Nearly always too narrow.

These are only a few of the many errors which one finds.

Before the shed about to be described was designed, the author called in as consultant Mr. R. G. Linton, Professor of Hygiene at the Royal (Dick) Veterinary College, Edinburgh, to whom he is greatly indebted for many helpful suggestions and much sound advice. A number of modern cowsheds were visited and their special points noted. As a result a shed was designed in which an endeavour was made to embody all the best and reject all the worst features. An understanding will, I think, be greatly facilitated by reference to the accompanying plans and photographs.

The shed is a brick structure with 9″ walls, the inside measurement being 91′ by 30′, with an extension of 23′ 9″, divided into a mixing house, a weighing room, cooling and bottling room and washing and sterilising chamber. The extension has a loft over.

The 18″ brick pillars supporting the walls are on the *outside* of the shed. The wall plates are 8′ 6″ from the ground and on top of these are two courses of bricks which fill in to the roof which is of asbestos slates lined by match boarding, supported by 7″ by 3″ rafters at 5′ centres; the wall plates are held by $\frac{7}{8}$″ tie rods with $\frac{5}{8}$″ hanger and secured to the wall by 2″ by $\frac{3}{8}$″ tie bars bolted through and coach screws at top. These $\frac{7}{8}$″ tie rods are the *only* places in the shed where dust can possibly lodge.

There are three windows on each side of Partridges' elite glazing 6′ by 5′. The lower edge is 2′ 6″ above wall plate. These windows, although admitting light, were placed in their position in order to get the early and late sun. Ample light is obtained by means of the Findlay ridge ventilator, which is composed of 18″ glass panes and opens outwards from the top, being hinged at its lower borders. This ventilator is operated by a lever from either end, and by means of this the amount of air let in through the glazed earthenware pipe above each manger is automatically controlled by the amount of air let out by the Findlay ventilator.

The roof boards are painted in white zinc and finished white zinc enamel (the only extravagance). The walls are cement rendered to a height of 5′ 6″, thus facilitating cleansing.

The shed holds 56 cows, 28 on either side. The measurements and fittings are shown on the Louden King plan.

It will be noted that the standings are graduated from 4′ 10″ to 5′ 2″, and the gutter is accordingly graduated from 2′ 2″ to 1′ 10″ in order to give the centre gangway an even width of 10′ 3″. This width of gangway allows of the entrance of a cart for cleaning-out purposes.

The mangers, standings, gutters and gangway are of concrete; the mangers are finished with a smooth surface; any roughness of

the manger and front of same was removed by rubbing with a carborundum stone. On the standings, gangway, etc., in the top half

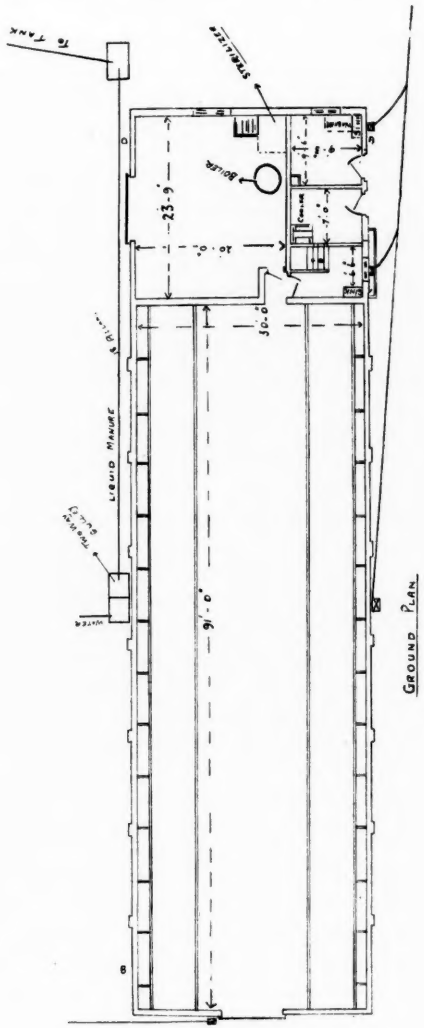


FIG. 1.—Ground Plan.

inch of the concrete was sown 4 lbs. to the square yard of carborundum filings; this was rolled in when the surface was sufficiently hard to

bear an 80-lb. roller. This has given an absolutely non-slip surface which will never wear smooth and is greatly to be preferred to herring-boning, etc., which holds the damp.

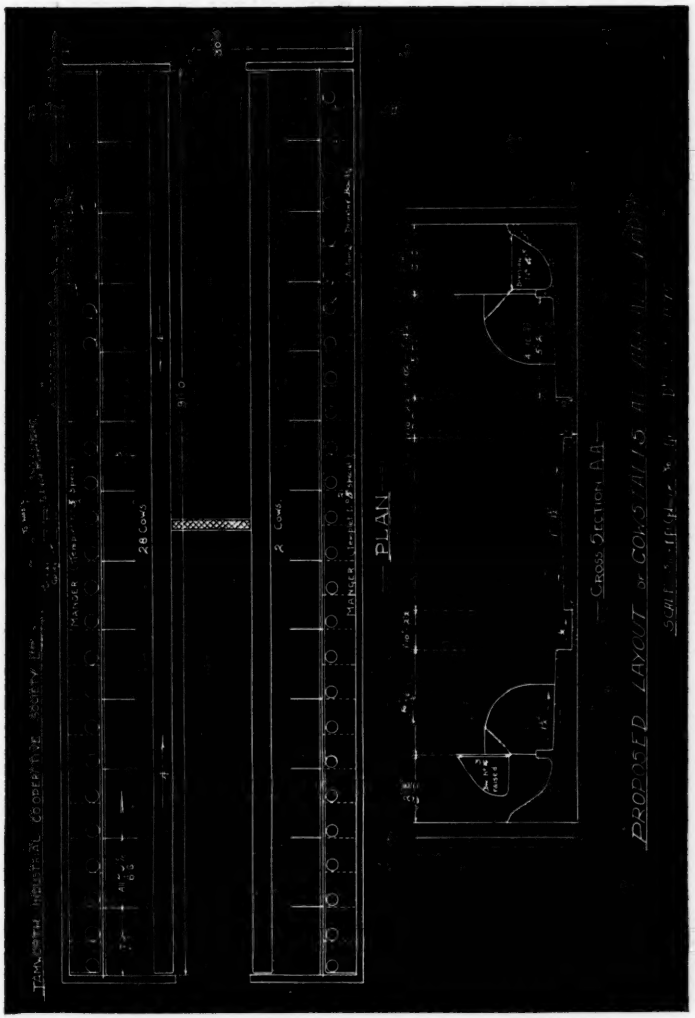


FIG. 2.—Plan of the Internal Arrangements and Fittings.

In the photograph, immediately above the mangers, will be seen the 4″ breathing tubes; these were placed low down so that the fresh air would come directly on to the cow's head, whether the animal is eating or lying down.

The liquid manure from one side of the shed is carried across the centre of the gangway in an 18″ gutter covered by a checker place; it then runs with the drainage from the other side under the standing through an 18″ channel into a two-way gulley outside the shed.

All angles in the shed, mixing house and dairies are concave except the angle at the heel of the standing and gutter, which is a right angle.

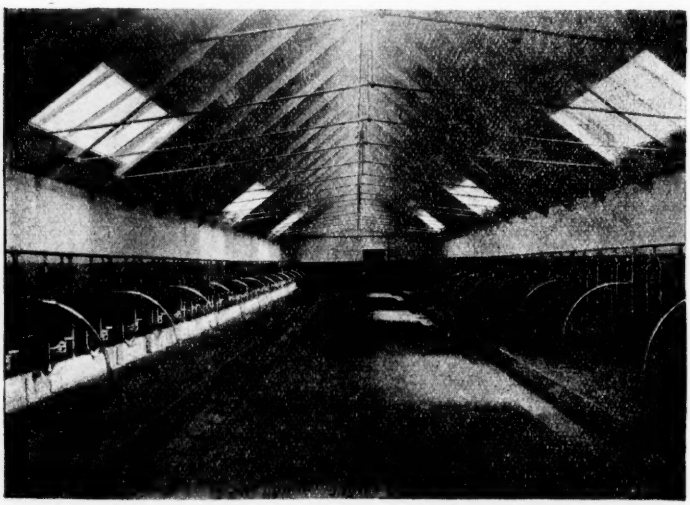


FIG. 3.—The Interior of the Cowshed when Completed.

Water is laid on for the automatic drinking bowls and also at both ends of the shed for washing down purposes.

At one end of the shed is a double sliding door through which the cows enter and leave. At the other end is a porch from which one door leads into the mixing house, the floor of which is of concrete and sown with carborundum filings; the walls are cement washed, two coats. There is a double sliding door on one side leading to the outside.

In the mixing house, in order to give more room in the washing house, have been placed Barford and Perkins' "Cleena-Milk" steam boiler and sterilising chest, the latter opening through the wall into

the washing house. On the right of the porch is a door which leads into the weighing room; here the men wash their hands at a sink; here also the milk is weighed and poured into a receiving tank which is high up on the wall; from this tank a plated pipe carries the milk through the wall into a strainer in the cooling room, where the milk is also bottled. There is no communication door between the cooling room and the weighing room, or between the cooling room and the washing room; the only door is to the outside.

The third room is the washing and sterilising room, which also has a door leading to the exterior; here is a sink, a soaking tank, bottle washer, etc., also the opening of the sterilising chest. Hot and cold water are laid on, the hot water coming from the boiler in the mixing house where 35 gallons are always ready for use.

The walls of all three rooms constituting the dairy are covered with cement to the ceiling; the ceiling is finished in white zinc enamel; floors are concrete with carborundum filings.

The only serious criticism of this shed has been by those advocates of a feeding passage. This was omitted for several reasons:—

(1) With modern methods of feeding and rationing of dairy cows according to milk yield the same bulk is not fed; roots when used are more often fed outside.

(2) In a double shed it means two extra passages to keep clean.

(3) Feeding passages are always dusty and untidy.

(4) Direct air supply is possible when feeding passages are omitted.

(5) The additional space available when feeding passages are omitted can be given to the centre gangway and so make a good cartway.

(6) To have both feeding passages and a wide centre gangway would add considerably to the expense of the shed; the roof supports would have to be heavier and therefore more complicated.

A shed constructed after this fashion is relatively much cheaper than any other type of shed housing an equal number of cows.

The same design of roof construction, lighting and ventilation has been used in single sheds where the cows are head to the wall and where a wide milking passage is left behind them.

For the purposes of shed alteration to conform to the requirements of the Milk and Dairies Order, 1926, any of the special features of this model shed can be embodied into an existing cow shed.

RICKETS.

By E. MORGAN, F.R.C.V.S., D.V.H.,
Puerto Cabello, Venezuela.

My intention at first was to simply forward the photo of two donkeys affected with rickets, viz., mother and offspring, for publication in The Veterinary Journal, but during my prolonged voyage across, through heat, hurricanes, and pleasant weather, I came in contact with several medical men and veterinary surgeons on board ship as well as in the United States, and on account of the accompanying photo of the case of rickets, the subject was often discussed. It is surprising how varied the opinions were regarding the etiology of the disease.

This is a disease which interests both medical man and veterinarian alike, although it is not communicable in any form, as far as we know, from one species to the other. Children very often are brought up on the milk of a cow, ass, or goat, but one should think twice before giving the milk of a rickety animal for a child's consumption.

Wheeler defines rickets as a nutritional disorder, occurring in the young, attended by changes in the development of the bones, clinically characterised by wasting, stunted growth and deformities. The same author further states that it is due to improper feeding, want of sunlight, and bad hygienic conditions among which is want of exercise. The diet is constantly found to be deficient in animal fats, *i.e.*, those fats which contain fat soluble A vitamin. And also that children reared by hand upon proprietary foods and those kept too long at the breast and those nursed by a sickly mother are more likely to suffer than breast-fed children of a healthy woman.

Finlay and Paton consider that lack of fresh air, and above all, lack of exercise, may produce rickets even in the absence of vitamin deficiency. The theory that it is due to defective supply of calcium in the food is now abandoned as contrary to evidence, but there is no doubt that such deficiency aggravates the already existing disease. The disease is not hereditary.

Kassowitz regards the hyperæmia of the bone-forming tissues as the primary lesion and he has shown that such hyperæmia leads to defective deposition of lime salts.

The muscles are small and flabby. Their striæ are indistinct. The blood is often said to be anæmic, but Finlay has shown that this is by no means constant.

Sir William Whitla, M.D., D.Sc., M.P., states, in his book, that there is danger in assuming too readily that absence of fat soluble A vitamin is the sole cause, and asserts that sunshine is more vital than vitamines.

The following extract from Whitla's is of particular interest to veterinary practitioners :—

" Factors in the production of rickets which are constantly overlooked are the food and care of the cow which produces the milk for the infant's use. The animal requires good food, sunshine and warmth. The practice of breeding milch cows on the refuse grains from distilleries has, in the writer's opinion, much to answer for ; the food is often in a state of incipient putrefaction and its use causes an abundant secretion of milk with a small amount of cream. So the most important element in the prevention and treatment of rickets is a pure and rich milk supply. Where this is abundant the condition is rarely seen." He further states that the deficiency has been supposed to be either in the fats, carbohydrates, *salts*, or proteids.

Upon the theory that rickets is due to faulty action of the ductless glands, gland extracts, blood tonics, arsenic, iron, quinine, etc., and also X-rays have been employed. None of these have given results like diets. So it is best to leave them alone in favour of balanced food.

About two years ago I mentioned in the pages of THE VETERINARY JOURNAL about the prevalency of this disorder in a certain district in Venezuela ; also, that donkeys were the only animals that manifested clinical symptoms, and, furthermore, that for a great number of years sugar cane had been cultivated on this land, until the percentage of carbohydrates went so low that cane farming had to be abandoned in this district and stock farming was adopted. I omitted then to mention one other important factor which I consider of great importance—that all animals of this farm, with the exception of donkeys, had free access to salt. Rock salt was being imported from England and owing to heavy duty was an expensive item, therefore the donkeys were denied this luxury. This year, rock salt is prohibited to enter the country, so the sheep were the next to be denied salt. During the last few months we have met several cases of rickets in young lambs which have been born since the time sheep have not received salt. This is the first time we have met a case in sheep on this farm. I might also mention that when we first placed sheep on this farm, a few years ago, they were without salt for several weeks, until we noticed that several of them died and others got emaciated. We soon improved matters by giving them salt *ad lib.*, as well as a little artificial food until they recuperated. In view of the fact that the donkeys never had access to salt, and developed rickets ; furthermore that in a few months time after the salt supply was cut off, as part of the diet of the sheep, we have met cases of rickets among them, it is assumed that the absence of salt is a factor in the production of rickets.

Upon the theory that rickets is due to lack of sunshine, fresh air and exercise ; and taking note of our particular cases, we must cancel this theory as untenable, as animals could not possibly get more sunshine, fresh air and exercise. At the same time I shall mention one case to prove that too much exercise under certain conditions leads to clinical symptoms of rickets. The female donkey on the right has bred three offspring ; the first developed rickets ; the second is apparently sound, which is, I consider, due to the fact that she was confined to a small paddock near the house, where but little exercise was allowed—this also proves to a certain extent that rickets is not hereditary. The third offspring is seen standing on the left side of the mother, which was born and bred on the same farm, but was allowed

Parent and offspring ; the subjects of Rickets.

to roam at will, and not confined to a small paddock like the previous one, which turned out sound. This third one, at an early age, developed clinical symptoms of rickets.. We have now laid a lengthy list of what we might term hypotheses before anyone who might be interested in this disease, with the idea that he might be stimulated to carry on further experiments that will eventually lead us beyond the field of hypotheses.

A glance at the list of opinions regarding the etiology of rickets, reminds the writer of a recent remark of Professor H. F. Moore, of Illinois, when discussing another subject, that each worker should have the willingness and ability to look at his world from more than one viewpoint. He recommends to all such the reading of Saxe's satirical ditty on the six blind men of Hindustan who went to see the elephant and who, as the result of their several observations, were

firmly convinced that the elephant was like (1) a wall, (2) a snake, (3) a fan, (4) a rope, (5) a tree, (6) a spear; and how "these men of Hindustan disputed loud and long . . . though each was partly in the right, and all were in the wrong."

THE ASSUMPTION OF MASCULINE CHARACTERS BY COWS.

By LESLIE PUGH, B.Sc., F.R.C.V.S.,
Sevenoaks.

THERE are few changes more interesting to the pathologist or clinician than those encountered in various species in which an apparently healthy female gradually assumes the qualities characteristic of the opposite sex. Clinically, many observations have been made on this subject in human medicine, whilst experimentally these changes have been brought about in fowls and other small laboratory animals.

That the cow is at times subject to these changes has been long recognised, but beyond the fact of blaming the condition to cystic ovaries and uterine sepsis, little work has been done in trying to elucidate the pathology of the condition. The writer some time ago (VETERINARY JOURNAL, 1923) essayed to draw a clinical analogy between the Graves-myxœdema syndrome, as occurring in man, and nymphomania in cows, at the same time attributing the assumption of masculine characteristics to hyperactivity of the anterior lobe of the pituitary. Since the publication of that paper, the writer has had the opportunity of examining a number of these cases *post-mortem*, and of submitting their various endocrine glands to histological examination. It is proposed to incorporate these findings in a short paper as a basis for discussion.

CLINICAL HISTORY.—Cows that develop masculine characteristics have invariably shown dysfunctioning of the genital apparatus before these masculine characters have become noticeable. In the greatest majority of cases one or both ovaries is the seat of follicular cysts. The early history is usually that of a good milker who is noticed to remain in œstrum for an unduly long period, often as long as a week, to be followed by another œstral period within a short space of time, until a state of almost continuous nymphomania is produced. The cow becomes excitable and untrustworthy. After a period of several months definite signs of the assumption of male characters can be detected, both in the gross anatomy of the beast and in her psychological behaviour.

MASCULINE PHASE.—The body hair is increased and is considerably coarser than is usual in a good milch cow. The hair on the occipital

crest is especially affected and tends to become curly. The face loses its female appearance and becomes coarsened. The neck and overlying skin thickens markedly, imparting to the observer the same impression as that of a bull's neck. The shape of the chest and trunk changes to the male type, and the clitoris is usually enlarged.

Associated with these changes one notices that the nervousness of the early stages has given place to a quieter but more aggressive nature. There is a tendency to bully the females, except when they are in œstrum. In this event they seek to mount these animals after the manner of the bull. They will usually try to get away from a large bull, but a small one will not infrequently be attacked viciously. Whilst standing in their boxes they emit a roar indistinguishable from that of a bull, and will often at the same time scrape the floor with their forelegs, throwing bedding, etc., over their backs in the manner of the male. In many other minor points they develop those characteristics and idiosyncrasies of the bull, at the same time losing those of the cow.

FIG. 1.—Section of Thyroid. Recent Case.

The mammary gland functions irregularly and tends to atrophy; the muscular coat of the uterus likewise atrophies. The pelvic bones become heavier, but tend to fracture more easily in the flatter parts of the ileum.

PATHOLOGICAL ALTERATIONS.—Before proceeding further, it might be of interest to record those conditions in women in which it is recognised that a definite change from the female to the male type occurs. Briefly they are as follows:—

(1) Neoplasia of the suprarenal cortices in girls before puberty. Generally due to malignant growths.

(2) Hyperplasia and neoplasia of the suprarenal cortices in adult women before the menopause.

(3) Hyperplasia of the anterior lobe of the pituitary. Every woman with acromegaly exhibits masculine characteristics.

Sexual precocity in women unassociated with the development of male characters is usually the result of ovarian tumours and hyperplasias (Lipshietz 435) (Bell, 1920, p. 154).

Blair Bell (p. 215) sums up this question thus: "When any of the masculinity-producing internal secretions become abnormally active in women, the ovarian secretions are antagonised or inhibited partly or completely, and the metabolism is directed towards the necessities of masculinity." "No doubt many of them have hyperplasia of the suprarenal cortices or the pituitary body, and atrophy of the ovaries, when it exists, is *secondary* to *primary* changes in the other organs of internal secretions which are responsible for the development of masculinity." A study of some of these cases as occurring in cattle rather suggests that anyway a fair proportion of such changes to masculinity arises *secondary* to pelvic abnormalities. The question, however, as is frequently the case in endocrinology, is difficult to decide and much more must be learnt of the interrelationships of the various glands to one another before anything dogmatic can be stated.

FIG. 2.—Section of Thyroid. Old-standing Case.

As a result of histological examinations, the writer has found definite changes or states in the ovaries, thyroid and pituitary glands. No obvious hyperplasia of the suprarenal cortices has so far been observed (although judging by analogy with human medicine it is quite likely to be found in some cases) nor any pathological changes of note in the pineal, parathyroids, pancreas or htymus.

Once a cow has developed definite male characters, she is usually destroyed before such characters have had time to be permanently inflicted on the beast. I have, however, one interesting case that

was allowed to live for two years before being slaughtered. The pelvic bones are much thickened and heavier than normal. There is almost complete synostosis of the sacro-iliac joint, the sacrum being fixed in the abnormal position assumed by this structure when the sacro-sciatic ligaments relaxed as a result of the continuous œstral excitement. The iliac crests are broadened. There are osteophytic processes at the seat of muscular insertions. The ileo-pectineal lines are well-defined. There is marked " cupping " of the acetabula.

THE OVARIES were enlarged owing to the presence of several large cysts. There were, besides, numerous smaller cysts about the size of a small pea. Histologically there was a complete absence of lutein tissue, neither was there any well-defined atretic follicular tissue. There were, however, follicles present containing apparently normal ova (see micro-photograph). Others appeared to reach a certain stage of development and then to have remained static as a small cyst lined by granulosa cells.

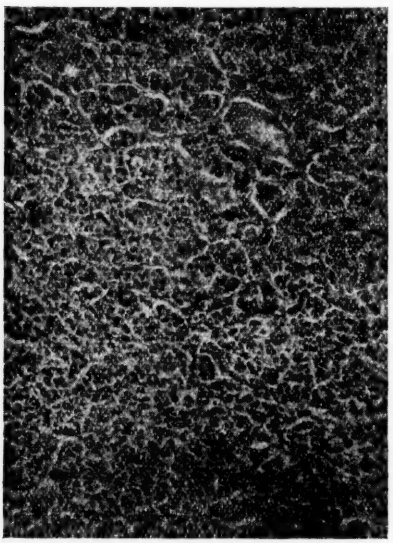


FIG. 3.—Section of Enlarged Anterior Lobe of Pituitary.

The thyroid glands were larger than normal, and showed by micro-photograph to have low epithelium with excess of colloid. The anterior lobe of the pituitary is definitely larger than normal and histologically the gland presents the appearance of great activity. The adenomatous appearance of the glandular tissue and the well-defined capillary system can be seen in the accompanying micro-photograph.

In two other cases of shorter duration, the ovarian and thyroid changes were the same as the above, but there was not found an obvious enlargement of the pituitary body. Histologically, however, the anterior lobe of these glands showed the same degree of activity.

I obtained the ovaries, thyroids and adrenal glands of a very recent case. Unfortunately, the bullet that killed the beast destroyed

the pituitary gland by splaying out in the *sella turcica*. The ovaries were typically cystic, but the thyroid glands did not show the same excess of colloid as the old standing cases with masculine characters developed. There would seem to be much more activity in the epithelium lining the vesicles (see micro-photograph). The medullary portion of the adrenal glands appeared larger than usual, but the cortex was unaffected.

DISCUSSION.—In the writer's previous paper the suggestion of thyroid implication was put forward in the following manner (page 1): "It is impossible in cows, and, the writer imagines, difficult in human beings, to separate with certainty the symptoms of hyperthyroidism from those of myxœdema. It is true that at one time physicians saw Grave's disease as one well-defined syndrome and myxœdema as another. Later, these were found to be much more closely connected than had hitherto been considered probable. Later still the conceptions of hyper and hypothyroidism have extended into an ever-widening sphere until the original clear-cut syndromes have begun to be obscured by the results of clinical and experimental observation.

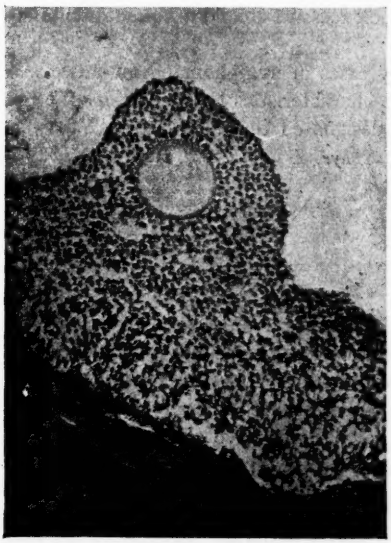


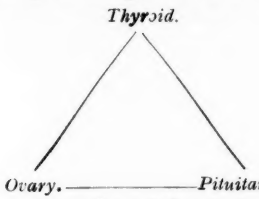
FIG. 4.—Section of an Ovarian Follicle in a Cow with Masculine Characteristics.

"Thus it comes about that nymphomania in cows cannot be presented as a syndrome due to the disorder of a single endocrine gland, but rather as a disturbance of that endocrine balance which we call good health, a balance to which each organ contributes its proper share of some specific secretion. There are, indeed, many such disturbances, nor can we say with certainty which gland is primarily at fault in each of them. But from many which are known, we pick out Grave's disease in man and nymphomania in cattle because they are seen to have so many features in common that their comparison seems likely to be the most fruitful line of research in approaching

the many problems which await solution in endocrinology and in practical therapeutics."

The paper referred to depended entirely on clinical analogy and as stated before, it involved the ovaries, thyroid and anterior lobe of the pituitary gland. But whereas histological examination of the endocrine glands in four cases show these three glands to be the only ones grossly affected, yet such examination does not appear to support the hypothesis that the changes are entirely analogous to the Graves-myxœdema changes. Whereas hyper-thyroidism would seem to be present in the early stages and hypo-thyroidism in the later stages, yet examination of the thyroids did not reveal any fibrotic changes. There was on the contrary the excessive colloid accumulation characteristic of hypo-thyroidism.

It is suggested that many cases of nymphomania in cattle which ultimately develop masculine characteristics have an endocrine upset which may conveniently be designated thus :—



In the present state of our knowledge it is not possible to assert which gland is affected before another. For the *Thyroid* one might say that the subjects of this disease are generally good milkers of a nervous temperament. They usually have clean-cut features and a fine skin. Tachycardia or increased pulse-rate in such subjects is common. For the *Ovary* it may be put forward that the first observed abnormality is a failure on the part of an apparently ripe Graaffian follicle to burst, with the result that œstrum persists. If the follicle is burst manually, the symptoms of "heat" subside till the next follicle matures. The question that naturally arises is, "Why did not the follicle burst?" The writer believes that it is the absence of the unknown factor that causes the follicle to burst that is primarily the cause of this disease.

For the Pituitary.—It is well known that there is a hyperplasia of the anterior lobe of this gland during pregnancy. It is also highly probable that the posterior lobe is of considerable importance to the proper functioning of a heavy milker. The pelvic changes, however, appear long to antedate the appearance of masculine characters so that it is not unreasonable to look upon this gland as being involved later than the ovary and thyroids.

Clinically, it would appear that if the follicles are burst immediately they lead to signs of œstrum, the male characteristics do not develop. Moreover, if this operation is combined with the administration of large doses of thyroid extract the percentage of returns to the normal œstral cycle is considerably higher than with any other treatment so far applied.

In acromegaly in human beings, cystic degeneration of the ovaries is present, but it is generally referred to as secondary. In cows, if the assumption of male characters is due to hyperactivity of the anterior lobe of the pituitary, it would appear to be due to a stimulus arising from the unruptured ovarian follicle; in other words, secondary to the cystic condition of the ovaries. Also, the fact that removal of the ovaries in nymphomaniac cows before the development of male characters prevents the appearance of the latter, whilst castration of an advanced case causes the regression of the male habits, although the external characters, *i.e.*, the coarse head, etc., remain.

Recently (ref.) it has been asserted that the follicular secretion is the essential female hormone. It has been shown that injection of follicular extracts will produce all the œstral changes in castrated females. One is thus led to suggest the somewhat peculiar conclusion that although the follicular secretion gives rise to the essential female characteristics of heat and œstral changes, yet, when in excess it would appear to stimulate the recessive male elements to greatly increased activity, and ultimately to dominate the female elements. It is this conclusion which is put forward for criticism and discussion.

VETERINARY NOTES FROM AMERICA.

By NELSON S. MAYO, M.S., D.V.S.,
Chicago, U.S.A.

In connection with your excellent editorial in the August number of The Veterinary Journal, the following notes may be of interest to your readers.

The depression in the agricultural and livestock industries following the World War had a corresponding effect upon the veterinary profession. Many practitioners left the profession to engage in more remunerative employment, and the attendance at all the veterinary colleges fell off to such an extent that practically all of the private veterinary schools closed, and some of the state schools were anxious as to the future. We "hit the bottom" about two years ago, and since then there has been a gradual but steady improvement until at present general practice is in a fairly satisfactory condition. The attendance at the veterinary schools, however, is still low and the

number of graduates at present is not equal to the vacancies occurring in the profession.

Another interesting and important feature is the increased number of short courses for graduate veterinarians being offered by the various state colleges and universities. Veterinary practice has been changing rapidly in the past few years, and such courses of lectures and demonstrations by recognised authorities are proving popular with practitioners as affording opportunities for keeping up to date. Several years ago an Army Veterinary School was established for the special training of army veterinary officers. This is proving to be very efficient. Army veterinary officers inspect all animal foods consumed by the American army—meat, fish, milk, cheese, eggs, etc.

Excellent progress is being made in the control of transmissible animal diseases particularly bovine tuberculosis, tuberculosis of swine and poultry is also becoming an important economic problem. The recent research work of Van Es and others indicating that approximately 80 per cent. of swine tuberculosis is due to tubercular organisms of the avian type throws much light upon this subject.

Neoarsphenamine (Neosalvarsan) is being used quite extensively and successfully in the treatment of recurrent ophthalmia of equines, in doses of 4.5 grammes or more. In treating this disease it is important to make a careful examination with an ophthalmoscope to determine whether there are serious structural changes in the eye.

Clinical Articles

GASTRIC SYPHONAGE OR A STOMACH-TUBE CASE IN CATTLE.

By WILLIAM J. RICE, M.R.C.V.S.,
Montrose, N.B.

FOLLOWING upon a fair experience in the value of stomach-tube therapy in impactions in horses and cattle, I have made it a practice to treat all such colon and rumen cases on similar lines. The following instance is somewhat interesting in its detail and strengthens the rational argument of the utility and efficacy of gastro-intestinal lavage.

SUBJECT.—A six-quarter Irish Store Bullock having little or no "butcher condition." First visited February 25th.

HISTORY.—Called in the evening to the beast, I discovered it more resembling a monster balloon on four legs than anything else, and recalled to mind the "pig-balloons" so dear to children. I was quietly informed "that it had been ailing for a week and had twice

received 1½ lbs. salt with 1 lb. treacle with no result, and that it had a terrible thirst."

DIAGNOSIS.—Impaction with tympany.

TREATMENT.—As I always carry my stomach tube with me I passed it into the stomach, and as soon as the tube entered that organ a steady flow of greenish dirty liquid issued. I called for a bucket and a three-gallon size was brought. Imagine the relief to myself and, incidentally, the bullock, when five buckets were taken off before the syphoning stopped. I estimated 12 to 14 gallons of fluid had been removed. I endeavoured to pump more out by attaching the lower nozzle of pump to the tube, but any flow was impeded by undigested material blocking the pump and tube. I then decided to pump in two gallons of warm water containing about 1 lb. sodium chloride, ℥ss formalin and ℥i barium chloride, and this done I extracted the tube, ordered sloppy mashes to be given and left the beast comfortable till the following day.

February 26th. Animal brighter and had taken mashes, but no action of the bowels having occurred, I repeated tube-drench of BaCl ℥i and pulv. aloes ℥iv in about two gallons of warm water and left some ammon. carb. and nux vomica powders to be given every three hours.

February 27th. Still no action in the bowels and tympany had increased. Continued the stimulant treatment with powders and gave a dose of formalin and salt by tube.

February 28th. No change, and rumen felt as doughy as ever on pressure. I prevailed on the owner to allow me to perform rumenotomy, and being a Sunday, plenty of help was forthcoming from the farm workers. It is no exaggeration to say that two farm barrow loads of dung was removed manually from the rumen. Unfortunately, the beast went down during the operation and the resulting displacement of rumenal wound from skin wound may have allowed some abdominal contents to pass into the peritoneum. However, the beast drank a sloppy gruel immediately on rising and was quite well the following day. Within three days, unfortunately, the old tympanitic condition returned and I advised destruction as further expense and treatment were considerations with the owner.

POST-MORTEM.—No evidence of peritonitis. Serous union had taken place in the rumenal wound. Rumen still containing a fair quantity of fluid and ingesta. On examining the reticulum and omasum I discovered a large abscess lying above the œsophageal groove and constricting it to complete occlusion at the omasum end. I could only blame this foreign accumulation as the primary cause

of the trouble. On section no foreign nucleus of wire or any other material was found.

OBSERVATIONS.—When making the *post-mortem* I was struck with the "clean" appearance of the membranes of rumen and reticulum, an almost blanched appearance resembling tissue fixed in formalin. It appeared to prove to me that despite the abnormal amount of ingesta present that the formalin dosing had permeated the whole mass and was acting uniformly over the whole compartment. I considered, therefore, that where a rapid absorption of a medicament is desired or where a permeating dose is required as in gastric and intestinal parasitic invasions stomach tube administration is indispensable. At the same time the volume of the vehicle employed must have a softening action on the impacted masses in the alimentary canal.

I may say that the above death was the only one out of six similarly treated cases on the same farm in the same season—a season of dry fibry turnips and bad straw for the farm concerned.

Also I would point out that I use as a stomach tube an ordinary half-inch hose pipe about ten feet long and that I pass it per nasal route in cattle also. It is comparatively easy; it avoids destruction of the tube on the laterally grinding teeth during administration and it obviates the use of a gag. Cattle, in my experience, take the nasal route with as much docility as does the horse. The usual standard red india-rubber tube is quite serviceable in cows and mature bullocks, but I find the former easier to pass in the smaller store stock, and for tympany of gastric origin I use the tube for immediate relief where formerly a trocar would have been employed.

AMPUTATION OF THE UTERUS.

By F. H. WILLETT, M.R.C.V.S.,
Staines.

SUBJECT.—Shorthorn Cow (third calving).

HISTORY.—In view of a recent clinical note *re* operation for everted uterus, my experience in a similar case may be of some interest.

I received an urgent message late one evening recently to a farm, and upon arrival found the patient had been delivered of twin calves, both alive, in the middle of a field.

On close examination the uterus was found to be wholly everted, very swollen, and, with the exception of the cotyledons, covered with numerous papilomatous growths of various sizes.

All the usual methods of replacing the uterus were tried without success, and, after upwards of two hours, it was decided to have recourse to amputation.

Having ligatured the neck as close as thought expedient, I administered a stimulating and antiseptic draught, and in view of it being midnight, away from the farm and very dark, we were forced to postpone the operation till daylight.

At six a.m. the next morning we returned to the case, gave another stimulant, etc., and proceeded to operate.

Four ligatures were applied, thus quartering the tissues as near the former ligature as possible, and the whole of the organ was removed with a scalpel, without any appreciable hæmorrhage ; the stump was dressed with carbolised oil and replaced.

Internal antiseptics and stimulants were given, and the parts dressed daily for a week, recovery being uneventful.

This case seems to show that deferred amputation may be advantageous, as my own previous experience with immediate removal of the uterus has not been too successful.

CHENOPODIUM POISONING IN THE DOG.

By CYRIL ELPHICKE, M.R.C.V.S.,
Sevenoaks.

I HAVE an interesting case of chenopodium poisoning to report, the more worthy of note owing to the few cases recorded. A litter of eight Schipperke puppies (aged seven weeks) was shown me, one being very much smaller than the rest. I suspected the presence of ascaridæ, and on my return home sent off by post gelatine capsules containing two minims of Ol. Chenopodii, one minim Ol. Terebenth, 10 minims Ol. Ricini. I also enclosed two capsules similar to these, but smaller in size and containing only half-minim doses Ol. Chenopodii, with instructions that these two smaller capsules were to be given to the very small puppy. Unfortunately these latter capsules were broken in the post, and the owner administered two of the larger capsules to the smallest puppy, the remainder of the litter having one each.

This was about 11 a.m., and five minutes after the capsules were given, the smallest puppy was seen crouching in a corner of the kennel. It was kept under observation, and inco-ordination of all four limbs was noticed when the animal attempted to move. The owner rang me up, and, as I was out, brought the puppy to the surgery, where I saw it on my return three hours later. The dog appeared then to be in a state of complete collapse, quite unable to stand, while its respiration was considerably disturbed.

XUM

One tablespoonful of castor oil and an ounce of liquid paraffin was given immediately, followed by a soap enema, without result. Half an hour later a second enema was given, and this removed 12 full-sized ascaridæ, which on examination were found to be dead.

Some two hours later half the above quantities of purgatives combined with five grains of pot. bromide were given, as he was seen to be experiencing a series of epileptic-like convulsions, in which a staggering gait was noticed when he attempted to walk. He also tried to scratch his ears, as though some irritation was present. This latter symptom was most pronounced.

Five grains of pot. bromide were administered every hour for the next three hours, making 20 grains in all, and the dog was then left till he showed signs of consciousness, which was not till about 10 p.m., or 11 hours after the capsules had been administered. Hot milk was given last thing in the evening, when the puppy was very much brighter.

In the morning the animal appeared to be in perfect health, and none the worse for its ordeal. An interesting point is that some 24 hours later a similar quantity of dead ascaridæ was passed. Since then the puppy has made immense strides in growth, it evidently having been stunted as a result of the large number of round worms preying on it.

A PECULIAR THORACIC INJURY IN A DOG.

By F. H. WILLETT, M.R.C.V.S.,
Staines.

SUBJECT.—Red Setter dog.

HISTORY.—The dog was taken out with the family on the river, and jumped from the boat into another. When so doing, fell on one of the rowlocks and injured himself.

A short time after he appeared in great pain, and I was sent for. Upon arrival I found him breathing heavily, with a fluctuating swelling on the left side of his thorax, the size of a Bath bun, and a distinctly audible *crepitus* suggesting considerable emphyema of the left lung, whilst the dog was crying out with fear and pain on being touched.

The owner was apprehensive that the shoulder was fractured, but an examination precluded this, and my prognosis inclined to a fracture of the first or second rib, although there was no dropping of the elbow, as one has seen in horses.

My reason for thinking it might be a fracture was the fluctuation of the swelling on the ribs at each expiration, and one would reasonably suppose the infiltration of air must be due to rupture of the chest wall.

There was no external wound, nor any hæmorrhage from the nose, which could be expected if the lung was pierced, nor was there any considerable rise of temperature which was 103 when taken on arrival.

A comfortable bed was arranged on the floor with instructions to keep him perfectly quiet. A dose of glycerol heroin was given, and some left to carry on, the owner being asked to 'phone later as to his condition and the advisability of another visit before retiring for the night.

Three hours later a message by 'phone stated that the patient was out of pain and breathing quite normally, and that the swelling had quite disappeared and he seemed quite himself again. I could hardly credit this, but on my visit the next morning, the patient had eluded his nurses and climbed a 4 ft. 6 in. fence ; and as he certainly appeared as though nothing had happened to him, no further treatment was indicated.

I am still at a loss to account for the severity of the symptoms and such an astonishingly quick recovery.

In the absence of any further symptoms which would enlighten me, I am inclined to the opinion that a slight rupture of the pleura had taken place, but this was quickly obliterated.

A FATAL CASE AMONGST PIGS CAUSED THROUGH EATING HOT POTATOES.

By E. MORGAN, F.R.C.V.S., D.V.H.,
Puerto Cabello, Venezuela.

ALTHOUGH this particular case happened some time ago, yet it is one that should interest a Sherlock Holmes. I shall mention the main facts as I remember them.

I received a telegram, late one evening, asking me to attend a case of suspected poisoning in pigs. When I arrived I found several dead pigs, while others were groaning and foaming at the mouths ; the saliva being blood-stained ; high temperature and blood-shot eyes. Some others were apparently in normal health, but were afraid to come near the feeding troughs. The total number of pigs, including dead and alive, was about a dozen ; all almost fully grown. They had been let out to a field for a few hours during the day, and when they returned to the sty were said to be in normal health. However, very soon after they ate some food in the sty, several were taken seriously ill. This information proved afterwards to be true as far as it went, but unfortunately it did not go far enough.

I should mention here that the owner's family, with the exception of a young daughter, and a labourer, were away from home in the

town during the day, and left the feeding of the pigs in charge of these two persons. I could not glean much valuable information from them.

We made a *post-mortem* examination on one of the pigs, and found that the stomach contained only a small quantity of food, viz., a mixture of maize-meal and potatoes and a small quantity of herbage. There were extensive inflamed areas on the mucous lining of the stomach and throughout the gullet. The intestines and other internal organs were apparently healthy. We now put a straight question to the attendants as to whether the pigs had been fed on hot food. The answer again was in the negative. Neither had they been fed on anything unusual from the kitchen.

We decided that it was wise to slaughter the few that were suffering "dolor insoportable," and were unable to stand on their feet. As it was now about midnight, we thought that the following day we might, perhaps, discover something reliable in connection with this mysterious case.

The next morning I again visited the farm, and found the dressed carcases of the slaughtered pigs quite of a normal appearance.

Once more I attempted to get some information from these two persons, but all in vain, so I turned my steps towards the yards and field, and from the latter took some plants, in order to get an expert's opinion whether they might contain any poison. The same day an uncle of the girl came there, and she confidentially confessed the whole truth to him about the case. The manservant had boiled the potatoes as usual in a large boiler, and soon afterwards she, quite innocently, mixed these boiling hot potatoes with the semi-liquid meal, and poured the mixture in front of the hungry swine, as soon as they entered the sty from the field. Soon afterwards she returned and found that several of the pigs were foaming at the mouths and in agony. She immediately called the manservant who found that the inner parts of the potatoes were almost at boiling temperature.

The girl had quite innocently, in his absence, poured this mixture of boiling-hot potatoes and meal into their troughs. Evidently several of the pigs thought, like the person who chewed the cayenne pepper seed by mistake, that the stomach was a better place to cool hot stuff than the mouth. The others were wiser and dropped the hot pellets on the floor, instead of swallowing them.

This case of misadventure resembles in many respects cases of accidental poisoning, and proves that the evidence given by witnesses is most unreliable and even misleading, especially where errors have been committed by attendants. Also that it is a wiser policy to let pigs suffer hunger, rather than to pour hot food in front of them, especially potatoes, which might appear cool enough on the outside, when they are hot in the centres.

Translation

TAR POISONING IN A COW.*

By Dr. F. HABL.
Alt. Rohlau.

I was called to a four-year-old cow, two months pregnant, which the owner said had drunk tar on the afternoon of the previous day.

The cow was in a meadow near the farm yard and had gone up to the garden hedge where a barrel of tar stood and had taken a gulp of it.

On my arrival she stood with her head down, staring coat, skin temperature cool, body temperature 38.2° C., appetite completely gone, taking a little water. There were muscular tremors. The animal smelt of tar, as also the urine and dung, both of which were dark in colour. Urination was retarded. Breathing and heart beats laboured.

Therapy.—A pound of Glauber's salts, a pint of castor oil, and caffein. On the second day there was an improvement, but on the fourth day the animal was very exhausted and listless, urine and dung showed a dark brown colour with a pronounced smell of tar. Caffein and rumen excitants were given and warm packs put on. On the sixth day there was an improvement, little appetite was present, linseed tea was drunk and to disinfect the kidneys I gave a daily dose of two drachms of urotropin. Gradually the condition improved, but the appetite remained bad for a long time. After three weeks abortion took place and the fœtus seemed as if it had been dead some time. The cow came in season after five weeks and remained pregnant.

I may state that such a case occurred previously on this holding and the cow had to be slaughtered. At the *post mortem* there was nephritis and a small tar ball in the rumen two inches in diameter.

Abstracts of Current Literature.

Bouchet, Dr. G.—Jaundice in the Dog.—Thesis for the Veterinary Doctorate, Paris, 1925.—*Revue Gén. de Méd. Vét.*, June 15th, 1926.

Icterus of the dog is an infectious and infective malady of a microbian nature, due apparently to the pullulation in the first part of the intestine of *bacterium coli*, which, progressing by angio-cholitis, invades the liver by the choleduct where it causes decay of the hepatic cells.

Death occurs not only by physiological destitution of the liver, but also by intoxication of the system, this intoxication being determined

* *Prager Archiv. f. Tiermedizin*, June 15th, 1926.

by the diffusion of toxins elaborated by the coli bacilli. This hypothesis leads the author to treat jaundice by lavage of the blood, brought about by saline water. In 17 sick dogs thus treated he obtained 14 cures. But this remedy is ineffective in young dogs; on seven ailing subjects aged about eight months only one was cured. He injects subcutaneously in different regions of the body 20 grammes per kilogram of live weight of the following solution:—Caffeine, Benzoate of Soda, a.a. 2 grammes; Chloride of Sodium, 9 grammes; Distilled Water, 1,000 grammes.

Two injections daily may be given if necessary. The solution is kept at a temperature of 37° C.; after the injection the dog is wrapped up in a warm coat.

Abstracts from the Lay Press

VETERINARY OFFICERS FOR WEST RIDING.

Full-Time Inspectors.

In place of the 27 part-time veterinary surgeons who now act under the West Riding County Council, it is proposed to appoint whole-time officers—one chief and four assistants. This recommendation came before the County Council at its last meeting, and was then referred back to the Agricultural Committee, who now return to the subject with further arguments in favour of the change, which will come before the County Council next Wednesday.

On this occasion the Finance Committee endorse the proposal, but suggest that the new officers should be under the joint control of the Agricultural and Public Health Committees. The proposed change is put forward on the ground that the veterinary work of the Council has greatly increased since the Tuberculosis Order of 1925 came into force, and will be still further increased by the new Milk and Dairies Order, which came into force at the beginning of this month.

Moreover, the Agricultural Committee make a point of the fact that sheep scab in the Riding is not decreasing, and that the disease cannot be successfully traced so long as the Authority have to depend upon individual owners reporting the same, and so long as no attempt can be made for a proper inspection of the districts where the disease is suspected.

The salary of the Chief Veterinary Officer will be £750, rising to £900; and that of the four assistants £400, rising to £600. It is estimated that the new system will mean no increase in expense. (*Yorkshire Post*, October 18th, 1926.)

TUBERCULOUS CATTLE IN THE WEST RIDING.

THE Agricultural Committee of the West Riding County Council report that since the order for the slaughter of tuberculous cattle came into force a year ago, the number of animals slaughtered has been 985. The amount paid in compensation to the owners has been £3,700 (an average of £3 15s.), of which 25 per cent. is payable by the Council and 75 per cent. by the Government. The amount received from the sale of the carcases was £1,130. (*Yorkshire Post*, October 18th, 1926.)

ANIMAL'S FREE FIRST AID.

DERBY ROAD SANCTUARY TO OPEN IN A FORTNIGHT.

A FREE first-aid centre and hospital for animals will be opened at 333, Derby Road, on the Bootle-Liverpool boundary, in a fortnight's time.

The hospital, which will be known as The Animal's Sanctuary, will be the first institution of its kind in England, and will be under the auspices of a new movement for the welfare of animals, launched under the patronage of Lord Derby, Lord Sefton and Lady Louis Mountbatten.

The aim of the "sanctuary" is to treat, free of charge, the sick animals and birds of those who cannot afford a veterinary surgeon's fee. It will be in charge of a fully qualified veterinary surgeon, who, in addition to rendering first-aid and attending to them during sickness, will give simple instructions to their owners on the best methods to look after their animals and birds. (*Liverpool Daily Courier*, October 19th, 1926.)

"SPECIALIST, CANINE DISEASES."

ROYAL COLLEGE OF VETERINARY SURGEONS TEST DESIGNATION.

EDWARD SEWELL, of Thurloe Place, South Kensington, was summoned before Mr. A. E. Gill, at the Westminster Police Court yesterday, by the Royal College of Veterinary Surgeons, for that he, not being on the Register of Veterinary Surgeons at the time of the passing of the Veterinary Surgeons Act, 1881, and not holding the certificate of the Highland and Agricultural Society of Scotland, did, in May last, use and take the description of "Specialist, canine diseases," thus stating that he was specially qualified to practise a branch of veterinary surgery contrary to section 17 of the statute.

Sir Alfred Callaghan, who appeared for the society, said that at one time the defendant was a member of the Royal College of Veterinary Surgeons, but on July 6th, 1917, upon a resolution by the council of the college, his name was removed from the register.

A lady took her Yorkshire terrier to defendant for treatment, and on the bill rendered defendant was described as "Specialist, canine diseases."

Mr. B. C. Cloutman, counsel for the defendant, said all the material facts were admitted. Defendant did describe himself as a canine specialist. The case was a somewhat interesting one, as it raised the point of the right of the Royal College of Veterinary Surgeons to object to, or, rather, prevent, unregistered practitioners from using the word or title "specialist." Defendant had been in practice as a veterinary surgeon for no less than 45 years, and was a canine specialist. He had a very large practice, and had used the title of "Specialist" for the last five years. Defendant's family was very closely associated with the college in its early days, and it was one of life's ironies that the college should now be prosecuting him for the offence set out on the summons. Counsel went on to urge that a specialist was a man who devoted himself to a particular branch of study, and that description had nothing whatever to do with his diplomas or qualifications. When defendant said he was a specialist he did not say he was specially qualified, but specially devoted himself to a particular branch of study. The section under which those proceedings were taken was originally construed very widely, but little by little that breadth of construction had been narrowed down. To-day it meant the holding of a degree or diploma, or whatever was required for the special qualification put on the register. A number of cases bearing on the point were cited by counsel.

The magistrate adjourned the hearing. (*The Morning Adverliser*, October 16th, 1926.)

BRITISH WEST AFRICA.

In the matter of agriculture, one of the dominating features of the greater part of British West Africa is the scarcity of cattle outside the Northern Provinces of Nigeria and the Northern Territories of the Gold Coast. This is in the main due to the tsetse fly. The lack of meat, milk, and manure, as well as the lack of animals for transport, is a big factor in the whole problem. There are, however, considerable areas of the Sierra Leone Protectorate free from tsetse fly, and the absence of cattle there is rather mysterious. There is a tradition that cattle used to exist there but were killed out by some epidemic. It is considered that the possibilities of restarting cattle in Sierra Leone are worth investigation. The great importance of cattle in relation to agriculture generally deserves the special attention of Government, and it is recommended that the Veterinary Departments should be

integral parts of the Agricultural Departments. It is suggested that the four colonies should combine to issue a quarterly agricultural review and that this might be considered at the coming conference of representatives of the Agricultural Departments of the four colonies to take place in Nigeria next December. Such a conference, Mr. Ormsby-Gore hopes, may in future be held regularly every three years. (*The Times*, October 6th, 1926.)

R.A.V.C. OLD COMRADES' ASSOCIATION ANNUAL DINNER.

About 200 members of the R.A.V.C. Old Comrades' Association sat down to dinner together at Anderton's Hotel, Fleet Street, London, E.C., on Friday evening, October 22nd, and a most enjoyable evening was spent.

The dinner was preceded by the Annual Meeting, at which a considerable amount of business was carried through and the officers for the coming year elected. Major-General Sir Layton Blenkinsop was re-elected as President, and the following gentlemen were elected as Vice-Presidents: Major-Generals H. T. Sawyer, Sir F. Smith, Sir John Moore, and E. R. C. Butler; Colonels W. Walters, F. W. Wilson, A. G. Todd and A. E. Clarke; Majors Hobday and Dayer Smith. A further number of gentlemen were elected to serve on the Committee, whilst Mr. R. Corr, the indefatigable Secretary, and Capt. Warburton, the all-popular Treasurer, were unanimously asked to retain their posts. The question of the Annual Subscription was again discussed, and it was decided that the amount should remain at half a crown *per annum*, and that all members who had paid up to date should be allowed a shilling off the dinner ticket when attending the annual reunion.

Sir Layton Blenkinsop took the chair at the dinner, proposing the usual loyal toast of the King and that of the Old Comrades' Association, whilst the third toast (that of the Guests) was entrusted to Major Hobday, who alluded in his speech to the Veterinary Press (represented by Mr. Eley of the Veterinary Journal, and Mr. Brown, M.R.C.V.S., of the *Veterinary Record*), to Sergt. O'Reilly (the artist designer of the various menu cards which have on each occasion graced the dinner table and been so much appreciated as souvenirs), and to Mr. Fred Mansell, the oldest war recruit who joined up in the Corps.

Mr. Mansell, who replied, is in his 83rd year and in his carriage is still as upright as a man of 40. He enlisted in 1917, absent-mindedly giving his age as 54, and forgetting that his son (who was also serving) was 46. He stated that his only regret was that he had not been permitted to go to France. He expressed delight at being with so many of his old comrades that evening and on behalf of himself and the other guests, wished the Association all success.

A band provided popular music during the dinner and everybody noted that the evening had renewed and cemented many old friendships and had given a very great deal of pleasure.

XUM

Reviews

The Individuality of the Pig: Its Production, Feeding and Management. By Robert Morrison. London: John Murray, Ltd. Price 7s. 6d.

In a book of some 377 pages, Mr. Robert Morrison, who has made a speciality of pig-breeding and management, gives his experiences for the benefit of others.

His book particularly deals with such important matters as selection of the breed and stock which is most suitable for the district in which the intending owner desires to establish his pig farm.

He treats of the general management of the pig from birth upwards, and gives practical advice on the question of feeding, with various rations and mixtures most suitable for respective ages.

Details are given for the building of styes and farrowing pens, whilst some 40 pages are devoted to the histories and points of the principal breeds, these being well illustrated by the photographs.

The weak chapter in the book is that in which the author attempts to write upon the diagnosis and treatment of disease, and it will be better in a future edition if he will have this re-written, or at all events supervised, by a veterinary surgeon.

Special Pathology and Therapeutics of the Diseases of Domestic Animals. By Hutyra and Marek. In three volumes. London: Baillière, Tindall & Cox. Price 105s. net.

English students and practitioners alike owe a deep debt of gratitude to their American colleagues, Drs. John R. Mohler and Adolph Eichhorn, for the labour they have put into the translation of another edition of Hutyra and Marek's well-known "Special Pathology and Therapeutics of the Diseases of Domestic Animals."

No book has ever been written with such authority on the diseases of animals in any language, nor is any text-book known better than that of Hutyra and Marek.

Written originally in the German language, it has now passed through its sixth German edition, and this present edition is the third in English.

Not only have the German and English editions a very wide circulation, but the French have considered it of sufficient importance to have it translated into that language, so that it may truly be said to be the most widely read and well-known veterinary text-book and work of reference in the world.

The last edition now occupies three volumes, the first of which alone, has 1,091 pages, this being devoted entirely to Infectious Diseases.

Volume No. 2 has 849 pages in which are described the diseases of the digestive, respiratory and circulatory, organs; whilst the third volume of some 835 pages, takes as its theme, diseases of the kidneys, bladder, blood, nervous system, skin and organs of locomotion.

No veterinary Surgeon can afford to be without it, for its details and descriptions are as valuable to the young practitioner in his daily work as to the older man for a work of reference.

To review it in detail would be impossible, as every page contains subject matter of intense interest, and its purchasing price is extraordinarily cheap when compared with the knowledge which it imparts on every subject.

It is gratifying to see that in this last edition our British colleagues have been asked to take a part, and that amongst the names of those who have done their share in the translation of articles in the second and third volumes, appear the names of Dr. Leslie Sheather, D.Sc., M.R.C.V.S., of the Institute of Animal Pathology, Camden Town, and Mr. Gladstone Mayall, M.R.C.V.S., the well-known Sub-editor of the VETERINARY JOURNAL.

Lyssa bei Mensch und Tier (Rabies in Man and Animals). By PROF. DR. R. KRAUS, D.V.M., F. GERLACH and DR. F. SCHWEINBURG. With 69 Figures in the text and six Coloured Plates. Urban & Schwarzenberg, Berlin and Vienna. Price 30 marks.

THIS book contains not only a *résumé* of the literature on the subject of rabies, but the actual experiences of the authors in experiment and research over a number of years on the subject.

The material is compiled in 39 sections and is so divided that both the medical man and the veterinary surgeon can soon gather the chief points as to the relative proportion and importance of the disease as it occurs in man and animals. The elucidation of some of the questions in connection with lyssa can only be solved by the co-operation of doctors and veterinary surgeons, and it is therefore a matter of congratulation and interest that both professions have contributed to the compilation of the work.

The six coloured plates represent the Negri bodies, the distemper micro-organism (nervous form), and the Borna streptococci or fœst corpuscles.

There is a very comprehensive survey of the Pasteur treatment and its various modifications and improvements. The book may be regarded as an up-to-date classic on rabies.

Personal

CONGRATULATIONS to Dr. Crew, who is an Honorary Member of the National Veterinary Association on the well-deserved success which has followed the patient work he has done in connection with animal breeding research during the past ten years.

His friends in the veterinary profession will be pleased to have seen the recent announcements in the daily press stating that the International Education Board had offered £30,000 towards the development of the School of Agriculture and Rural Economy in the University of Edinburgh; particularly with the object of putting on a firmer footing the Department of Animal Breeding.

Lord Woolavington, whose name is so well-known in the racing world, and whose generosity towards projects of this kind has been frequently manifested, has intimated that he will give the sum of £10,000 towards the endowment of this Chair of Animal Breeding.

It must be very gratifying to Dr. Crew that the difficulties under which he has been working for many years are now likely to be smoothed away and that he can rely in the no distant future on being able to build a place of which he can be proud and which will have every modern convenience and equipment for study and research.

LIEUT.-COLONEL T. DUNLOP YOUNG, O.B.E., D.V.S.M., M.R.C.V.S., has been appointed to assist His Majesty's Inspector in conducting an inspection of the instruction for "The Training of Meat Inspectors" in training schools.

MR. H. J. EDE, whose name is well known in the profession as a radiographer who has specialised in veterinary X-ray work, was unanimously elected as President of the Society of Radiographers at their Council Meeting on October 12th.

The retirement of MR. FINLAY KERR, F.R.C.V.S., Superintending Veterinary Inspector of the Departments of Land and Agriculture for the Irish Free State, after 29 years' service, was marked by a presentation from his colleagues of a pair of handsome silver rose bowls and a testimonial expressing their goodwill.

Mr. Kerr will be missed, too, by a numerous band of English friends and colleagues to whom he was well known for many years through the position which he fulfilled with such satisfaction, of Secretary to the R.C.V.S. Examining Board in Ireland.

WE gather from a brochure written in German which has been sent to us, that Mr. H. H. Curson, F.R.C.V.S., has been made a Doctor of Veterinary Medicine of the Hanover School; upon which honour we congratulate him.

The thesis submitted by him for the Doctorate was on the subject of "The Treatment of Nagana with Tartar Emetic in Zululand in the years 1921-1923." The pamphlet is of 83 pages with two charts and 12 illustrations, and is published by the firm of Eberlein & Co., of Hanover. In an inserted short biography we are told that Mr. Curson was born in 1892 at Upper Umzimkulu in the Kapprovinz and was educated at the Merchiston Preparatory School and the Michaelhouse Diocesan College, Natal. He was sent to England in 1910, entered the Royal Veterinary College and qualified in 1914. In March, 1917, he joined Mr. C. E. Gray, M.R.C.V.S., in anti-rinderpest work in German East Africa. In 1920 Mr. Curson was appointed to the Directorship of the Veterinary Research Laboratory at Grahamstown and in 1921 to the Directorship of the Nagana Research Laboratory in Zululand; whilst in 1923 he became lecturer in Hygiene in the Veterinary College of the South African Union under Sir Arnold Theiler.

Publishers' Notices

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Letters for the JOURNAL, literary contributions, reports, notices, books for review, exchanges, new instruments or materials, and all matter for publication (except advertisements) should be addressed to the Editor.

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